

A review of the *Stathmopoda aprica* species-group (Lepidoptera: Stathmopodidae) from Japan

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Abstract The *Stathmopoda aprica* species-group is newly proposed, characterized by a very narrow forewing, the absence of forewing veins R1 and CuA, coremata developing on the membranous eighth abdominal segment in the male, the caudal convexity near the base of the tegumen in the male genitalia and the bifurcate signum in the female genitalia. A new species, *S. fusciumeraris* n. sp., and a newly recorded species from Japan, *S. aprica* Meyrick, 1913, are included in the species-group. The adult external characteristics, wing venation, and male and female genitalia of these two species are illustrated and compared in detail. In addition, *S. aprica* is compared with *S. stricta* Meyrick, 1913, since Kasy (1973) implied that they were probably conspecific. *S. fusciumeraris* n. sp. is associated with three species of the genus *Ficus*. Although the host plant of *S. aprica* is unknown, all the known host plants of this group are *Ficus* species.

Key words *Ficus*, genitalia, *S. fusciumeraris* n. sp., taxonomy, wing markings, wing venation.

Introduction

The genus *Stathmopoda* is the largest group of the Stathmopodidae. It is mainly distributed in the tropical to subtropical regions and known to be a group with diverse feeding habits. This group contains more than 200 species around the world. Up to the present, 18 species have been recorded in Japan (Sugiura and Yamazaki, 2004; Jinbo, 2004–2008; Terada *et al.*, 2011; Terada, 2012). But many specimens were left unidentified. When I had an opportunity to examine specimens of *Stathmopoda* sp. recorded in Sugiura and Yamazaki (2004) and other Japanese species similar to it, I found an undescribed and an unrecorded species in Japan. The feeding habit of the undescribed species had been reported in Sugiura and Yamazaki (2004). The unrecorded species in Japan was *S. aprica* Meyrick, 1913. Kasy (1973), however, reported that *S. aprica* might be conspecific with *S. stricta* Meyrick, 1913. There was thus a need to reexamine and compare the *Stathmopoda* sp. recorded in Sugiura and Yamazaki (2004), *S. aprica*, *S. stricta* and similar species. These species share the following characteristics: coremata developing on the membranous eighth abdominal segment in the male, peniculi developing on the tegumen in the male genitalia and a bifurcate signum in the female genitalia, characteristics which are unique in the genus. In this paper, I establish the *Stathmopoda aprica* species-group, with description of a new species and redescription of a newly recorded species with illustrations of distinguishing characteristics.

Materials and methods

Some of the specimens were received from Dr K. Yasuda at the National Institute for Agro-Environmental Sciences,

Ibaraki-Pref., Japan (NIAES), Dr U. Jinbo at the Department of Zoology, National Museum of Nature and Science, Japan (NMNS), Dr T. Yamauchi at the Toyama Institute of Health, Toyama-Pref., Japan (TIH), Mr T. Mano at the Toyota Yahagi River Institute, Aichi-Pref., Japan (TYRI) and Mr T. Fukuda, and are deposited in the collection of the Entomological Laboratory, Kagoshima University, Japan (KGU). The other specimens were borrowed from the collection of the Entomological Laboratory, Osaka Prefecture University, Japan (OPU) and the Hokkaido University Museum, Japan (HoUM).

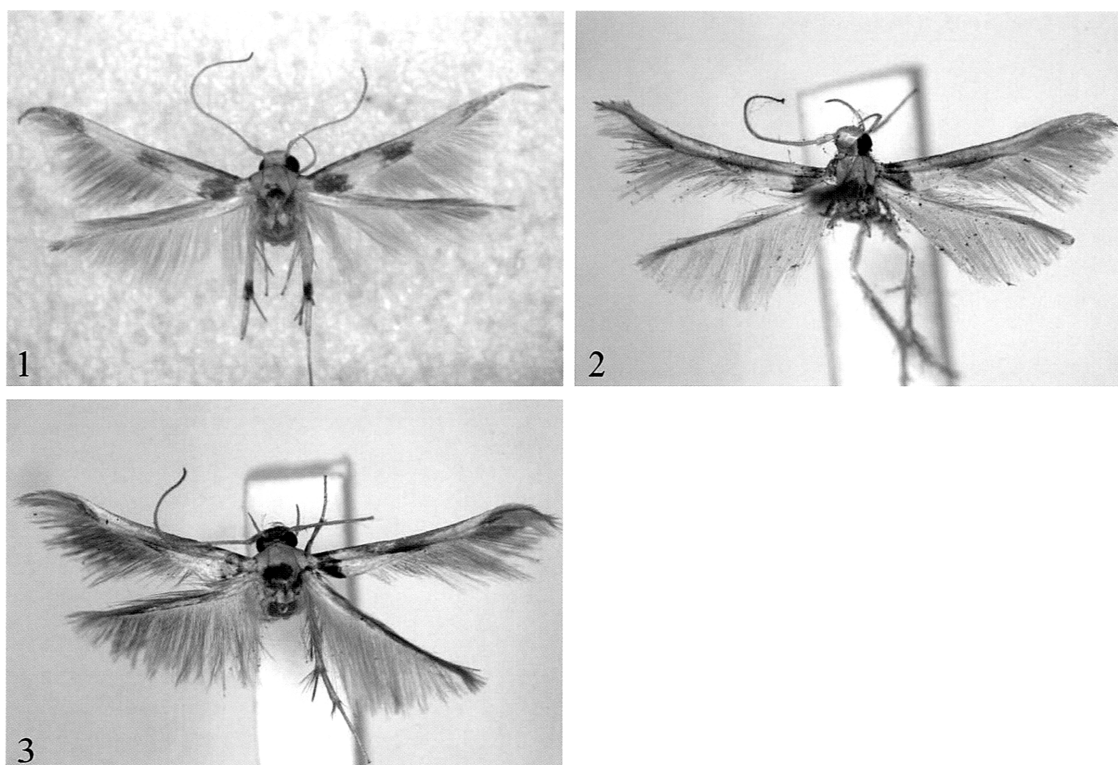
The holotype images of *S. aprica*, *S. stricta* (BMNH(E) #982874, 982875) (Figs 2–3) and the genitalia slide of *S. stricta* (Fig. 16) were received from The Natural History Museum, London, United Kingdom (BMNH) (Copyright Trustees of the BMNH, used with permission).

Wing venation was observed after preparation. Detached wings were cleaned to remove scales with a raccoon-fur brush in 40% EtOH, and were stained with acid fuchsin solution. Male and female genitalia were dissected after maceration for about 6 h in 10% aqueous KOH, heated with lactic acid in a drying oven (60°C), and stained with mercurochrome solution.

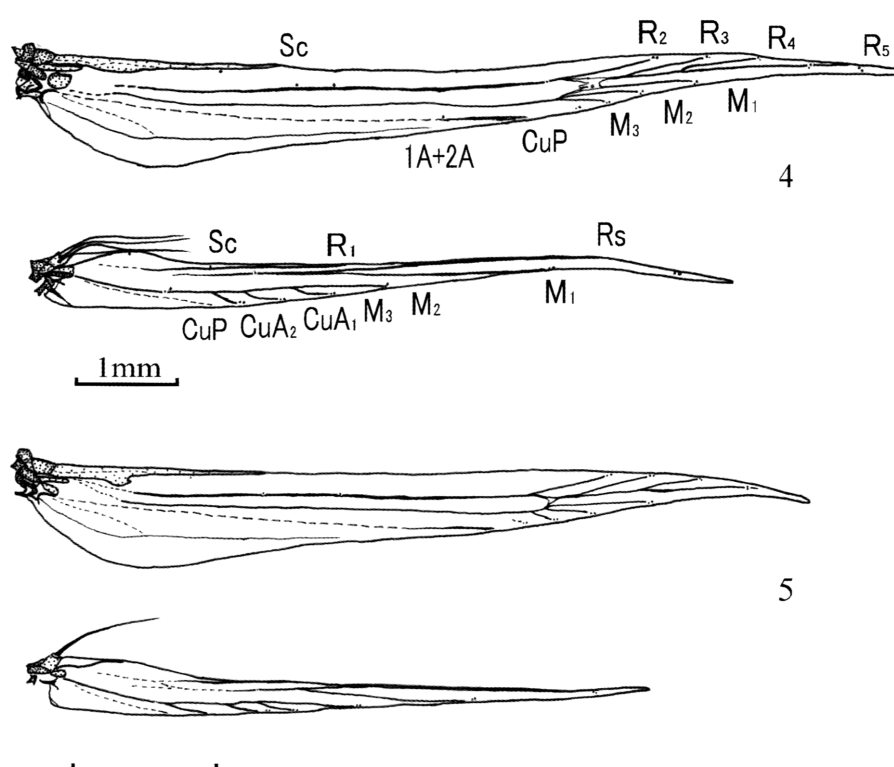
The terminology follows Kasy (1973), Yasuda (1988) and Koster and Sinev (2003).

Taxonomy**The *Stathmopoda aprica* species-group**

This new species-group contains the following nine species: *Stathmopoda aprica* Meyrick, 1913, *S. crassella*



Figs 1–3. Adult specimens. 1: Holotype, *Stathmopoda fusciumeraris* n. sp. ♂. 2: holotype, *S. aprica* ♂ (BMNH(E) #982874). 3: holotype, *S. astricta* ♂ (BMNH(E) #982875) (Figs 2–3. Copyright Trustees of the BMNH, used with permission).



Figs 4–5. Wings: shape and venation. 4: *Stathmopoda fusciumeraris* n. sp. ♀. 5: *S. aprica* ♂.

Table 1. Distribution and host plants of the *Stathmopoda aprica* species-group.

Species name	Distribution	Host plants
<i>S. aprica</i>	Japan, Sri Lanka	unknown
<i>S. crassella</i>	Gambia	unknown
<i>S. astricta</i>	India	unknown
<i>S. ignominiosa</i>	Viet Nam, India	<i>Ficus glomerata</i> in fruit
<i>S. sycophaga</i>	India	<i>F. glomerata</i> in fruit, <i>F. racemosa</i> in fruit
<i>S. sycastis</i>	India, Pakistan, Afghanistan	<i>F. carica</i> in fruit, <i>F. nuristanica</i> in fruit, <i>Ficus</i> sp. in fruit
<i>S. ficivora</i>	Turkmenistan	<i>F. carica</i> in fruit
<i>S. ficipastica</i>	Nigeria	<i>F. glumosa</i> in fruit, <i>F. ingens</i> in fruit
<i>S. fusciumeraris</i>	Japan, Taiwan	<i>F. bengutensis</i> in fruit, <i>F. septica</i> in fruit, <i>F. variegata</i> in fruit

Walsingham, 1891, *S. astricta* Meyrick, 1913, *S. ignominiosa* Meyrick, 1913, *S. sycophaga* Meyrick, 1913, *S. sycastis* Meyrick, 1917, *S. ficivora* Kasy, 1973, *S. ficipastica* Bradley, 1974, and *S. fusciumeraris* n. sp. Distribution and host plants of this species-group, which were recorded in Walsingham (1891), Fletcher (1920), Kasy (1973), Bradley (1974), Robinson *et al.* (2001) and Sugiura and Yamazaki (2004), are summarized in Table 1.

Remarks. The ground color of head, thorax and forewing is ocher to orange. Three fuscous to blackish brown fasciae are present on the forewing near base, about middle and near apex. The forewing is very narrow, and the veins of forewing R_1 and CuA are absent. Coremata are usually present on the membranous eighth abdominal segment in the male. The peniculi of the tegumen are present in the male genitalia. Two signa are present, and the longer one is bifurcate in the female genitalia.

***Stathmopoda fusciumeraris* n. sp.**

[Japanese name: Inubiwa-maikoga]

Stathmopoda sp.: Sugiura and Yamazaki, 2004: 113–118.

Diagnosis. This new species is similar to *S. aprica*, but can be distinguished by the markings of thorax and forewing as follows. In this species, dark brown markings are present at the lateral margin of the prothorax. The forewing costa is brown and paler towards the apex. In contrast, in *S. aprica*, the dark brown markings are absent. A broad brown streak is present at basal 7/10 of costa and has a bifurcate apex.

In the genitalia, this species can be distinguished by the presence of the cornutus and some triangular spicules near connection of ductus and corpus bursae.

Description. Wing expanse 12.7–19.2 mm. Forewing length 6.0–9.3 mm. Labial palpus and scape yellow,

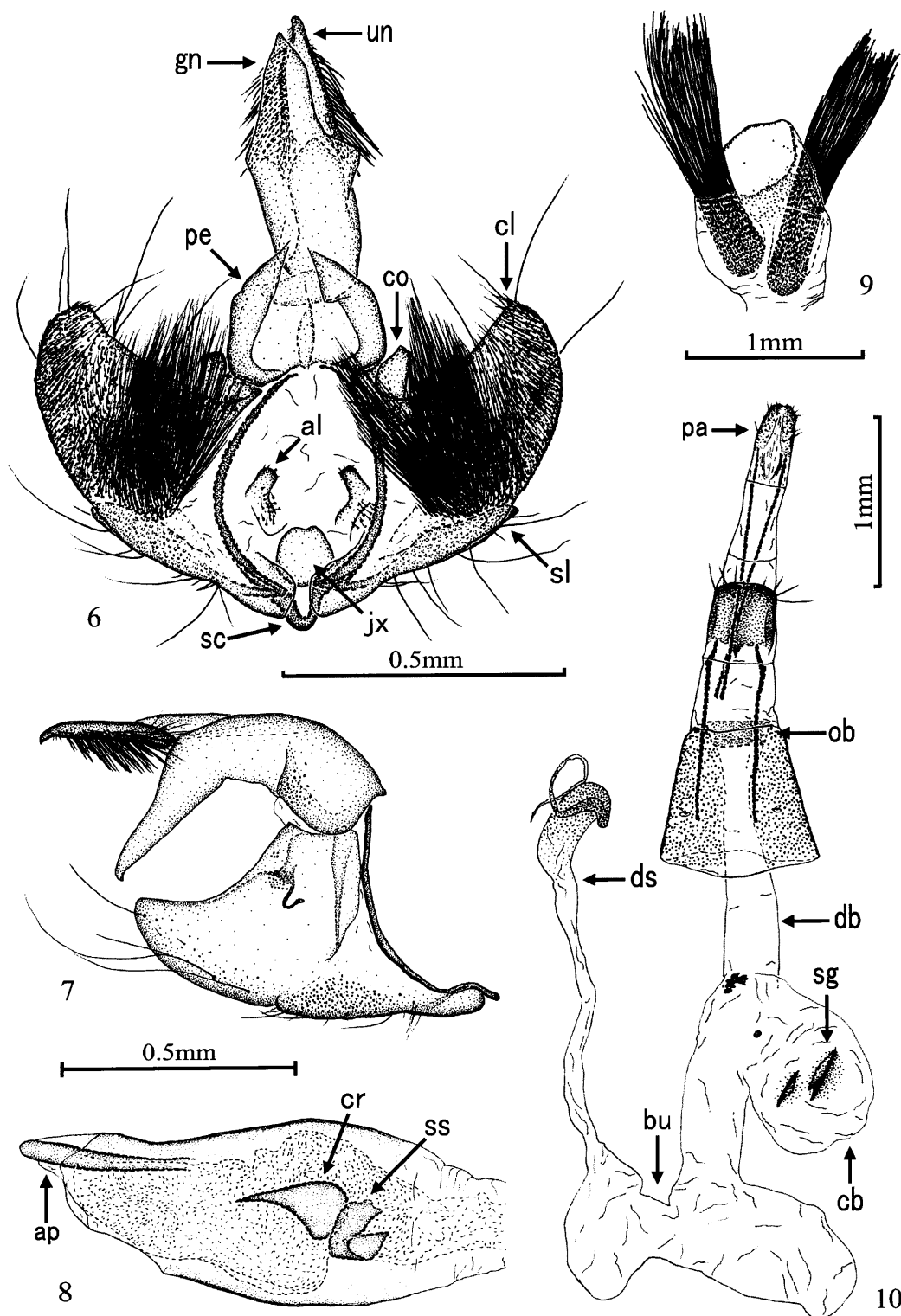
ventrally white. Vertex and occiput yellow; frons white. Thorax yellow, with two dark brown markings at lateral margin of prothorax; mesial blotch at caudal margin of mesothorax, cephalic half brown, caudal half pale brown.

Wing markings (Fig. 1). Forewing yellow; costa brown, paler towards apex; three brown fasciae present near base, about 2/5 and 3/4 of wing, respectively; second fascia sometimes expanded towards dorsum; third fascia cephalically edged inwardly oblique. Cilia gray to ocher. Hindwing and cilia gray.

Wing venation (Fig. 4). Forewing narrow, widest near base; 10-veined; discoidal cell long, occupying basal 7/11 of wing. Sc connected with costal margin of wing on basal 3/10. R_1 absent; R_2 from near upper angle of cell; R_3 , R_4 , and R_5 stalked. M_2 and M_3 , arising from common base, around caudal angle of cell. CuA_1 and CuA_2 absent. 1A rudimentary. Hindwing very narrow, 9/11 as long as forewing; 9-veined; discoidal cell open. R_1 connected with Rs . Rs running to near apex of costa. M_2 , M_3 , and CuA_1 stalked, in common with CuA_2 ; CuA_2 running to about 3/11 of dorsum. CuP rudimentary.

Legs dorsally yellow, ventrally pale white; fore-femur and -tibia ventrally dark brown; mid-tibia dorsally with verticillibristle at middle and apex; hind-tibia brown apex, dorsally covered with bristles except near apex; hind-tibia and first segment of hind-tarsus dorsally with verticillibristle at apex. Abdomen dorsally pale ocher, ventrally pale white; spines of abdominal terga present on second to sixth segments.

Male genitalia (Figs 6–9). Coremata developing on membranous eighth abdominal segment. Uncus stout, down-turned apically, tapering caudally, with setae on lateral surface. Gnathos stout, as long as uncus, tongue-shaped, with down-curved acute apex in lateral view. Tegumen with round peniculi. Valva broad, with round apex; costa dorsally triangular; cucullus oval, 1.5 times



Figs 6–10. *Stathmopoda fuscimeraris* n. sp., genitalia. 6: Caudal view of male, aedeagus omitted (un: uncus; gn: gnathos; pe: peniculi; co: costa of valva; cl: cucullus; sl: sacculus; jx: juxta; sc: saccus; al: anellar lobes). 7: lateral view of male, aedeagus, anellar robes and juxta omitted. 8: aedeagus (ap: apical patch of stimuli; cr: cornutus; ss: sclerotized structure). 9: coremata. 10: ventral view of female (pa: papillae anales; ob: ostium bursae; db: ductus bursae; cb: corpus bursae; sg: signum; bu: bulla; ds: ductus seminalis).

as long as uncus, with numerous setae on inner surface; sacculus sclerotized, blunt apically, ventrally with setae. Vinculum elongate. Juxta round. Anellar lobes developed, subrectangular, weakly sclerotized, with setae on surface. Aedeagus four times as long as uncus, stout, slightly tapering towards apex, with spiniform cornutus, long; sclerotized structure present near base, subrectangular and thin; apical patch of stimuli present near apex of aedeagus, 1/3 length of aedeagus, subrectangular, with round apex.

Female genitalia (Fig. 10). Papillae anales longer than wide, weakly sclerotized, dorsally with many short and long setae; joint membrane between papillae anales and eighth abdominal segment longer than papillae anales. Eighth abdominal segment dorsally sclerotized, cephalodorsally triangular, with short and long setae arranged along caudal margin. Apophysis anterioris long; apophysis posterioris about 1.3 times as long as apophysis anterioris. Ostium bursae subrectangular, with numerous microsetae on inner surface. Ductus bursae long, longer than length of corpus bursae. Corpus bursae with some triangular spicules near connection of ductus and corpus bursae. Two signa narrow, situated at about cephalic 1/3 of corpus bursae; longer signum bifurcate. Bulla long, originating from near caudal margin of corpus bursae, with wrinkles near base; two expanded parts present. Ductus seminalis long, originating from near cephalic margin of bulla; microspines present near apex.

Type material. HOLOTYPE ♂, Urauchi, Iriomote Island, Okinawa-Pref., Ryukyu Islands, Japan, 29. iii. 1980, K. Yasuda (1 ♂ Gen. sl. no. 11116), deposited in KGU. PARATYPES, JAPAN. RYUKYU ISLANDS: 1 ♂, Kubiririndo (100 m), Tokunoshima Island, Kagoshima-Pref., 8. vi. 2007, H. Ootsubo. Okinawa-honto Is.: 1 ♀, Okuni-rindo, Kunigami-Vill., 14. v. 1998, T. Ueda; 1 ♂, Ditto, 26–27. v. 2000, T. Mano (1 ♂ Gen. sl. no. 10045); 1 ♂ 3 ♀, Ditto, 29–31. vii. 2005, U. Jinbo (1 ♂ Gen. sl. no. 12003); 1 ♀, Yona, Kunigami-Vill., 11. iv. 1996, T. Ueda; 1 ♂ 1 ♀, Ditto, 13. iv. 1997, T. Ueda; 2 ♂, Ditto, 21. iii. 2002, K. Sugisima (Light trap). Ishigaki Is.: 1 ♀, Nagura, 2. xi. 1979, H. Yamashita; 1 ♀, Ditto, 15. ix. 1982, T. Tanabe; 3 ♂ 10 ♀, Mt. Banna, 3–4. xi. 1979, A. Nakayama (1 ♂ 1 ♀ Gen. sl. no. KY-22, KY-23, 1 ♀ Wing sl. no. W-7); 1 ♀, Takeda, 28. iii. 1993, T. Mano; 2 ♀, Ditto, 14. iii. 1998, T. Mano; 1 ♀, Kabira, 14. iii. 1998, T. Mano; 5 ♂ 8 ♀, Mt. Omoto, em. 9, 12–13, 15–16. xi. 1979, Y. Arita (1 ♂ 1 ♀ Gen. sl. no. KY-24, KY-25); 1 ♂, Ditto, 21. v. 1983, T. Tanabe; 1 ♀, Ditto, 8. v. 1998, T. Ueda; 1 ♀, Ditto, 4. x. 1999, Y. Miyamoto; 1 ♀, Ditto, 9. x. 2001, N. H. Ahn; 3 ♀, Ditto, 22–23. ii. 2002, T. Mano; 1 ♀, Ditto, 18. iii. 2002, K. Sugisima (Light trap); 1 ♀, Ditto, 30. iii. 2002, N. H. Ahn, B. W. Lee and T. Hirowatari (Light trap); 1 ♀, Ditto, 19. iii. 2012, T. Terada (Light trap); 1 ♂, Itona, 21. v. 2009,

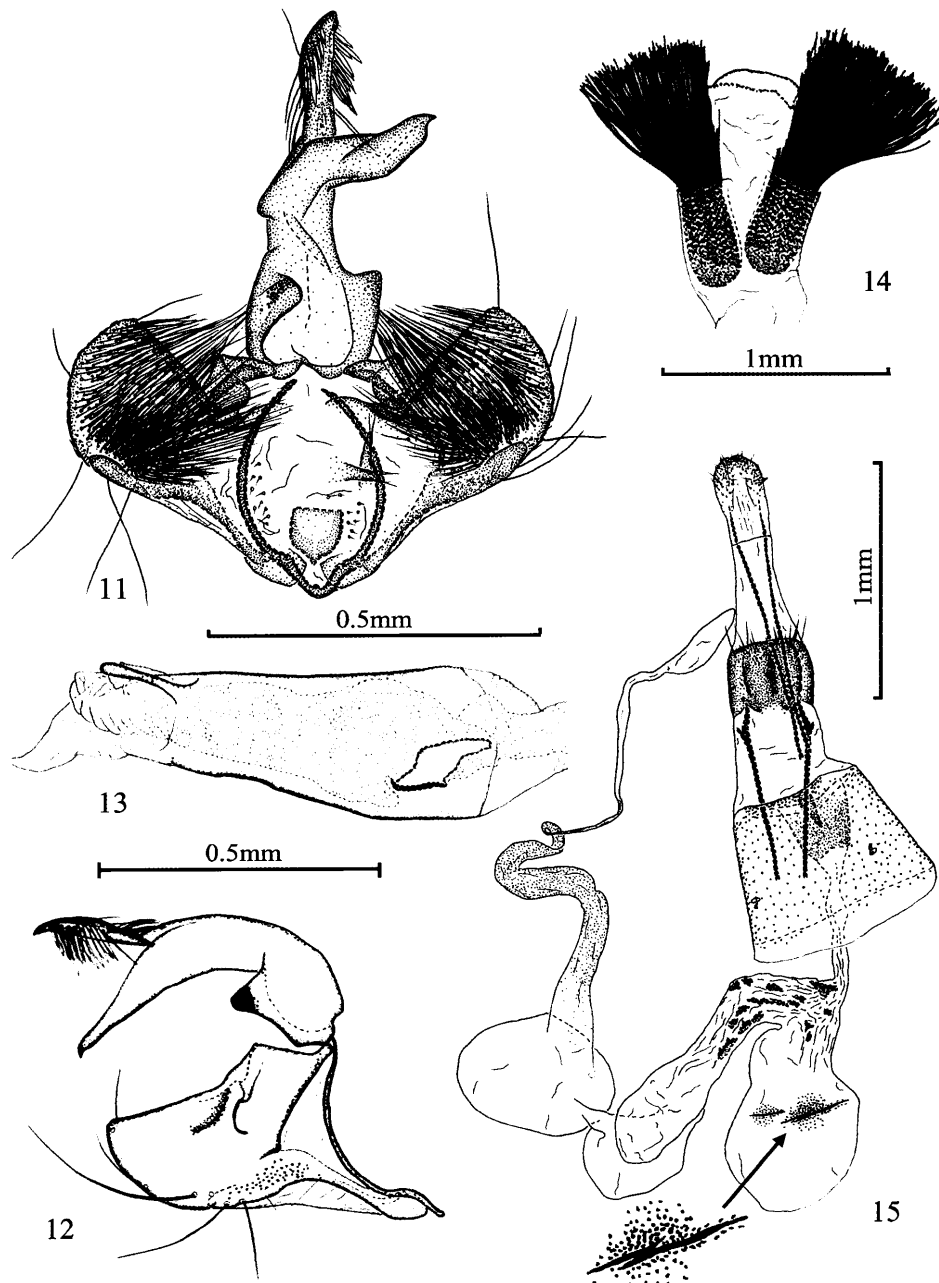
U. Jinbo; 1 ♀, Hoshino, 22. v. 2009, U. Jinbo; 3 ♀, Shinsui-Park, 3. 5. vii. 2010, T. Terada (Light trap) (3 ♀ Gen. sl. no. 10046, 10054, 10091, 2 ♀ Wing sl. no. 10052, 10104). Iriomote Is.: 1 ♂ 3 ♀, Kanpira Folls, 29–30. xii. 1979, I. Kanazawa (1 ♂ Wing sl. no. W-16); 1 ♀, Sonai, 2–3. i. 1980, I. Kanazawa (Light trap); 1 ♂ 1 ♀, Otomi, 8. x. 1979, S. Hashimoto (1 ♂ Gen. sl. no. KY-73); 1 ♀, Mt. Hoshi, 11. iv. 1981, S. Hashimoto; 1 ♀, Uhshiku, 13. x. 1998, T. Ohno; 1 ♂ 1 ♀, Urauchi, 26. iii. 1993, T. Mano; 1 ♂ 3 ♀, Ditto, 22. iii. 1995, T. Mano; 1 ♂ 4 ♀, Ditto, 15–16. iii. 2012, T. Terada (Light trap); 1 ♀, Airagawa-rindo, 15. iii. 2002, K. Sugisima (Light trap); 1 ♂ 1 ♀, Funaura, 27–28. xii. 1979, I. Kanazawa (Light trap); 3 ♂ 3 ♀, Ditto, 25–26. 28. iii. 1982, E. Nishida; 1 ♀, Ditto, 11. xi. 1982, T. Tanabe; 1 ♀, Ditto, 24–30. x. 1989, T. Kumata; 1 ♀, Ditto, 14. x. 1992, T. Ueda; 3 ♀, Ditto, 25. iii. 1993, T. Mano (Light trap) (1 ♀ Gen. sl. no. 10058); 4 ♂ 4 ♀, Ditto, 21. iii. 1995, T. Mano (1 ♂ Gen. sl. no. 10053); 1 ♂ 4 ♀, Ditto, 24–25. vii. 1995, T. Mano; 1 ♂ 1 ♀, Ditto, 8. x. 2001, K. Sugisima (Light trap); 1 ♂ 2 ♀, Ditto, 15–16. iii. 2002, K. Sugisima (Light trap); 2 ♀, Shirahama, 4. iv. 1962, Y. Arita; 2 ♀, Ditto, 27. iii. 1993, T. Mano; 1 ♂ 1 ♀, Ditto, 22. vii. 1995, T. Mano (1 ♂ Gen. sl. no. 10110); 1 ♂ 1 ♀, Ditto, 13. vii. 2001, T. Yamauchi (Light trap); 1 ♀, Ditto, 9. x. 2001, K. Sugisima (Light trap); 1 ♂ 2 ♀, Uehara, 5. v. 1981, M. Yamashita; 2 ♂ 1 ♀, Ditto, 26. iii. 2002, T. Hirowatari, N. H. Ahn, B. W. Lee, Y. Miyamoto and K. Yamada (Light trap); 8 ♀, Ditto, 11–12. iii. 2011, T. Terada (Light trap) (3 ♀ Wing sl. no. 11115, 11119, 11126); 1 ♀, Ditto, 13. iii. 2011, R. Tobimatsu; 5 ♀, Komi, 16. 18. xii. 1977, T. Saito; 2 ♂ 2 ♀, Ditto, 13–14. iii. 2011, T. Terada (Light trap) (1 ♂ Gen. sl. no. 12002). Yonaguni Is.: 2 ♂, Mt. Donan, 13. ii. 1993, T. Mano (2 ♂ Gen. sl. no. 10063, 10068); 1 ♂, Mt. Urabu, 31. vii. 1994, T. Yamauchi. TAIWAN. 1 ♂, Wulai, Taipei-City, 11. vii. 1961, M. Ogata; 1 ♂, Lienhuachih 750m, Nantou, 30. vi–2. vii. 1979, T. Kumata and M. Kumata; 1 ♂, Chih pen, Tai tung, 10. iii. 1982, S. Hashimoto; 2 ♀, Ditto, 27–30. v. 1982, T. Tanabe.

Distribution. Japan: Ryukyu Islands (Tokunoshima Island, Okinawa-honto Is., Ishigaki Is., Iriomote Is., Yonaguni Is.). Taiwan.

Host plants. *Ficus septica* Brum. f., *F. bengutensis* L. and *F. variegata* Blume (Moraceae) (Sugiura and Yamazaki, 2004).

Biology. Adults emerge all year round except late summer. Mature larvae bore into the syconia of host plants and feed on the inside of the syconia and parts of the seed (Sugiura and Yamazaki, 2004).

Etymology. *Fuscus* (Latin) = dark. *Umerus* (Latin) = shoulder. The specific epithet, *fusciumeraris*, derives from two dark brown markings at lateral margin of prothorax.



Figs 11–15. *Stathmopoda aprica*, genitalia. 11: Caudal view of male, aedeagus omitted. 12: lateral view of male, aedeagus, anellar lobes and juxta omitted. 13: aedeagus. 14: coremata. 15: ventral view of female.

Remarks. The larvae of this species feed on three species of the genus *Ficus*, and bore into the syconia (Sugiura and Yamazaki, 2004). The host plants are closely related to the edible fig tree, *F. carica*. In addition, species closely related to the new species (*S. sycastis* and *S. ficivora*) feed on *F. carica*, (Kasy, 1973; Robinson *et al.*, 2001). Therefore, it is important for fig cultivation to investigate the actual host range of the new species.

***Stathmopoda aprica* Meyrick, 1913**

[Japanese name: hime-inubiwa-maikoga]

Stathmopoda aprica Meyrick, 1913: 86; Kasy, 1973: 280

Diagnosis. This species is similar to *S. fuscimeraris* n. sp., but can be distinguished by the markings of thorax and forewing as follows. In this species, the prothoracic dark brown markings are absent. A broad brown streak

with a bifurcate apex is present at basal 7/10 of costa. In contrast, in *S. fusciumeraris*, the dark brown markings are present. The costa of the forewing is brown and paler towards apex.

In the genitalia, this species can be distinguished by the following characteristics. The cornutus is absent. Some spinose lamellae near the connection of bulla and corpus bursae are present.

Description. Wing expanse 8.5–13.0 mm. Forewing length 4.0–6.2 mm. Labial palpus and scape orange, ventrally white. Vertex fuscous; frons white; occiput orange. Thorax orange, with mesial streak and blotch on dorsum blackish brown, situated at cephalic half and caudal margin of mesothorax, respectively.

Wing markings (Fig. 2). Forewing orange; costa with broad brown streak at basal 7/10, apically bifurcate; three brown fasciae present near base, 3/8 and about 7/10 of wing, respectively; third fascia not reaching costa, connected with one of the bifurcate streaks. Cilia gray to ocher. Hindwing gray. Cilia gray to ocher.

Wing venation (Fig. 5). Forewing narrow, widest near base; 11-veined; discoidal cell long, occupying basal 2/3 of wing. Sc connected with costal margin of wing on basal 3/10. R₁ absent; R₂ from near upper angle of cell; R₃, R₄, and R₅ stalked. M₂ from near base of M₁; M₃ around caudal angle of cell. CuA₁ present only near dorsum, rudimentary; CuA₂ absent. 1A+2A running to about 2/5 of dorsum, rudimentary. Hindwing very narrow, 7/9 as long as forewing; 9-veined; discoidal cell open. R₁ connected with Rs. Rs running to near apex of costa. M₂, M₃, and CuA₁ stalked, in common with CuA₂; CuA₂ running to about 2/7 of dorsum. CuP rudimentary.

Legs dorsally yellow, ventrally pale white; fore-femur to-tarsus ventrally dark brown; mid-tibia dorsally dark brown near base and middle, dorsally with verticillbristle at middle and apex; hind-tibia dorsally covered with yellow to brown bristles; hind-tibia and first segment of hind-tarsus dorsally with yellow to brown verticillbristle at apex. Abdomen dorsally pale ocher, ventrally pale white; spines of abdominal terga present on second to sixth segments, brown.

Male genitalia (Figs 11–14). Coremata developing on membranous eighth abdominal segment. Uncus slender with blunt apex. Gnathos as long as uncus, with down-curved acute apex in lateral view. Tegumen with subtriangular peniculi. Valva broad with round apex; costa truncate, convex caudally; cucullus sublozenge-shaped, slightly longer than uncus, with numerous setae on inner surface; sacculus sclerotized, round apically, ventrally with setae. Vinculum elongate; saccus 3/11 length of uncus,

round cephalically. Anellar lobes developed, narrowly subtriangular, weakly sclerotized, with setae on surface. Aedeagus three and a half times as long as uncus, slightly tapering towards apex; cornutus absent.

Female genitalia (Fig. 15). Papillae anales slightly longer than wide, weakly sclerotized, dorsally with many short and long setae; joint membrane between papillae anales and eighth abdominal segment longer than papillae anales. Eighth abdominal segment sclerotized dorsally, cephalodorsally emarginate, with short and long setae arranged along caudal margin. Apophysis posterioris short; apophysis anterioris about 2/3 times as long as apophysis posterioris. Ostium bursae subrectangular, with numerous microsetae, with bar-shaped sclerotized structure at caudal margin. Ductus bursae short, 7/10 length of corpus bursae. Corpus bursae with two narrow signa, situated at about middle of corpus bursae; longer signum bifurcate. Bulla long, originating from caudal margin of corpus bursae, with some spinose lamellae near connection of bulla and corpus bursae; wrinkles present near base; three expanded parts present. Ductus seminalis long, originating from near cephalic margin of bulla, with micro spines.

Specimens examined. HOLOTYPE ♂, Martala, SRI LANKA, x. 1904, J. P. (1 ♂ Gen. sl. no. BMNH Microlep. 15202).

JAPAN. RYUKYU ISLANDS: Yakushima Is.: 1 ♂ 2 ♀, Nakama, 20–21, ix. 1978, S. Moriuti (1 ♂ 1 ♀ Gen. sl. no. 10092, 10095); 2 ♀, Ditto, 20. ix. 1978, Y. Arita; 50 ♂ 61 ♀, Onoaida, 4–5, 8–9, 19, 22. ix. 1979, K. Yasuda (5 ♂ 2 ♀ Gen. sl. no. KY-6, KY-7, KY-71, KY-72, KY-94, 11101, 11117, 1 ♀ Wing sl. no. W-4). 1 ♀, Nase, Amami-oshima Is., 5. viii. 1961, N. Okabe. Okinawa-honto Is.: 2 ♀, Yona, Kunigami-Vill., 18–21. x. 1973, M. Owada; 1 ♀, Ditto, 1. vii. 2011, S. Sugimoto (Light trap). Ishigaki Is.: 1 ♂, Mt. Omoto, 12. x. 1979; 1 ♀, Ditto, 21. v. 1983, T. Tanabe; 1 ♀, TARC, 14. v. 1985, K. Yasuda (Light trap); 1 ♂ 3 ♀, Hegina, 13, 20. viii. 1989, K. Yasuda (Light trap); 1 ♀, Mt. Banna, 8. vii. 1994, K. Yasuda; 1 ♀, Takeda, 14. iii. 1996, T. Mano (1 ♀ Gen. sl. no. 10071); 1 ♂, Kainan, 15. vii. 2001, T. Yamauchi (Light trap). Iriomote Is.: 1 ♂, Funaura, 26–27. xii. 1979, I. Kanazawa (Light trap); 1 ♂, Shirahama, 27. iii. 1993, T. Mano (1 ♂ Gen. sl. no. 10093); 2 ♂ 3 ♀, 8km north of Takana, 2–3, 7, 10. x. 2001, K. Sugisima (Light trap); 1 ♂ 1 ♀, Komi, 14. iii. 2011, T. Terada (1 ♂ 1 ♀ Gen. sl. no. 11034, 11036, Wing sl. no. 11118). Yonaguni Is.: 1 ♂, Mt. Donan, 12. ii. 1993, T. Mano (1 ♂ Gen. sl. no. 11010); 2 ♂ 4 ♀, Mt. Urabudake, 29, 31. vii. 1994, T. Yamauchi.

Distribution. Japan: Ryukyu Islands (Yakushima Is., Amami-oshima Is., Okinawa-honto Is., Ishigaki Is., Iriomote Is., Yonaguni Is.). Sri Lanka (Meyrick, 1913).

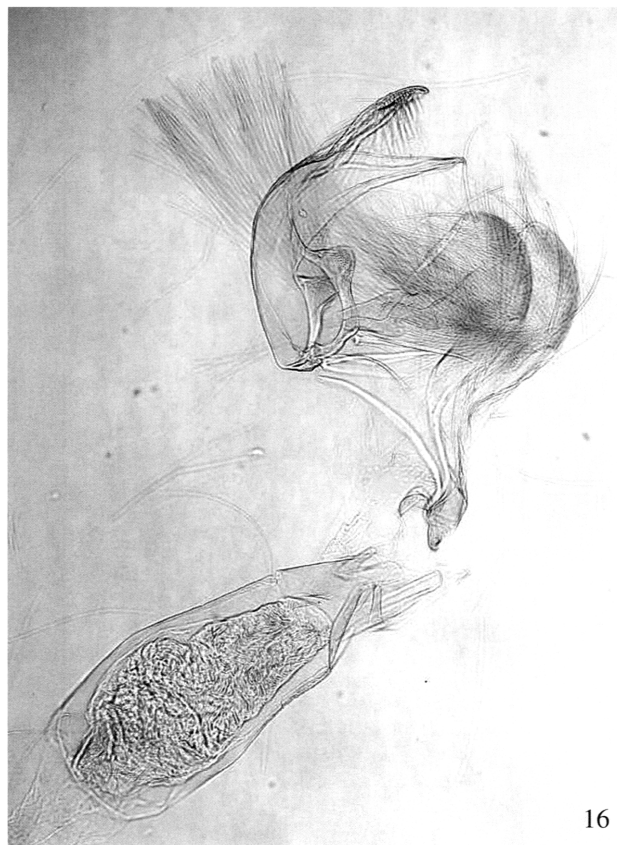


Fig. 16. *Stathmopoda astricta*, lateral view of male genitalia (Copyright Trustees of the BMNH, used with permission).

Host plants. Unknown.

Biology. Scarcely known. Adults emerge in late winter to early spring, mid-spring, midsummer to mid-fall and early winter at least.

Remarks. Kasy (1973) reported that this species might be conspecific with *S. astricta*. However, the two species can be distinguished by the color of the occiput and characteristics of the male genitalia as follows. In this species, the occiput is orange (Fig. 2). The uncus, gnathos and apical patch of stimuli of the aedeagus are rather small, and the connection of the valva with the tegumen is narrow (Figs 12–13). In contrast, in *S. astricta*, the occiput is dark fuscous (Fig. 3). The uncus, gnathos and apical patch of stimuli are rather large, and the connection of the valva with the tegumen is broad (Fig. 16).

Discussion

Stathmopoda brachymochla Meyrick, 1937, *S. moschlosema* Bradley, 1961 and *S. culcitella* Sinev, 1995 are similar to the *aprica* species-group in that coremata are present in

the male and a bifurcate signum in the female genitalia, but they can be distinguished by external and genital characteristics as follows. In these species, the ground color is dark gray. Two orange fasciae are present on the forewing, and the forewing is broad. In the genitalia, many papilliform processes of the cucullus are present in the male; numerous sclerotized lamellae of the ostium bursae are present in the female. Therefore, they do not belong within the new species-group. However, these species might be closely related to the *S. aprica* species-group because their unique characteristics in the genus, coremata in the male and bifurcate signum in the female genitalia, are shared with the group.

Though the genus *Stathmopoda* is known to have diverse feeding habits, all the known host plants of the new species-group are *Ficus* species (Fletcher, 1920; Kasy, 1973; Bradley, 1974; Robinson *et al.*, 2001; Sugiura and Yamazaki, 2004) (Table 1). Therefore, speciation within the species-group might be related to evolution of the genus *Ficus*. However, it is not possible to conclude firmly that the evolution of this species-group and their host plants are related to each other because of the existence of some species other than the species-group feeding on *Ficus* species (Kasy, 1973; Robinson *et al.*, 2001), and because of lack of data on the host range and taxonomic status. In order to examine the evolutionary history of this group and its relationship with the *Ficus* species, it will be necessary to carry the above study considerably further.

Acknowledgements

I wish to express my sincere gratitude to Dr Y. Sakamaki (KGU), for his giving advice and critically reading the manuscript. I warmly thank Mr K. R. Tuck (BMNH) for taking the holotype images, which were indispensable for this study. I heartily thank Dr K. Yasuda (NIAES), Dr T. Hirowatari (OPU), Dr M. Ohara (HoUM), Dr U. Jinbo (NMNS), Dr T. Yamauchi (TIH), Mr T. Mano (TYRI) and Mr T. Fukuda for use of their valuable collections, on which this study is based, and Mr S. Sugimoto (Graduate School of Agriculture, University of the Ryukyus, Okinawa-Pref., Japan) for cooperating with my field work. Special thanks are due to the students of the Entomological Laboratory, KGU, for their kind guidance and constant encouragement.

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摘 要

日本産 *Stathmopoda aprica* 種群（鱗翅目、ニセマイコガ科）の再検討（寺田 剛）

Sugiura and Yamazaki (2004) の *Stathmopoda* 属の 1 未同定種とこれに近縁であると考えられる種について検討し、*S. aprica* 種群を認めた。また、このグループに含まれる 1 新種イヌビワマイコガ（新称）(*S. fusciumeraris* n. sp.) と日本新記録種ヒメイヌビワマイコガ（新称）(*S. aprica* Meyrick, 1913) について記載および再記載を行った。両種は外見的特徴が互いに似ているため、成虫の外見的特徴、翅脈、雌雄交尾器を図示し、比較した。両種は外見的には胸部や前翅の斑紋で識別できる。また、ヒメイヌビワマイコガは Kasy (1973) において *S. astricta* Meyrick, 1913 と同種である可能性が指摘されているため、この 2 種についても外見的特徴、雄交尾器について比較を行った。その結果、両種は別種で

あると考えられた。ヒメイヌビワマイコガの寄主植物は未知だが、イヌビワマイコガはイヌビワ属 3 種を寄主植物とし、*S. aprica* 種群の構成種の既知の寄主植物はすべてイヌビワ属である。

Stathmopoda aprica 種群

前翅は細く、R₁ 脈と CuA 脈を欠く。雄の膜質の腹部第 8 節に発香総が発達し、交尾器のテグメンにペニキュリが発達する。雌交尾器のコルプス・ブルサエは 2 つのシグナムを持ち、その内 1 つは 2 又となっている。本種群には *S. aprica* Meyrick, 1913, *S. crassella* Walsingham, 1891, *S. astricta* Meyrick, 1913, *S. ignominiosa* Meyrick, 1913, *S. sycophaga* Meyrick, 1913, *S. sycastis* Meyrick, 1917, *S. ficivora* Kasy, 1973, *S. ficipastica* Bradley, 1974, *S. fusciumeraris* n. sp. の 9 種が含まれる。

1. *Stathmopoda fusciumeraris* n. sp. イヌビワマイコガ (Figs 1, 4, 6-10)

開張 12.7-19.2 mm. 前翅長 6.0-9.3 mm. 胸部は黄色であり、前胸両側端に暗褐色、中胸中央後端に褐色の斑紋を持つ。前翅は黄色で、前縁は褐色。基部、2/5, 3/4 に褐色帯が走る。雄交尾器のエデアグスにはコルヌツスを持つ。雌交尾器のコルプス・ブルサエのブラとの接点付近に少数の小骨片を持つ。幼虫は寄主植物の隠花果に潜り、その内部や種子を摂食する。成虫は 1-7, 9-12 月に発生する。本種は Sugiura and Yamazaki (2004) によって *Stathmopoda* sp. として扱われた種と同種である。分布：徳之島、沖縄本島、石垣島、西表島、与那国島；台湾。寄主植物：オオバイヌビワ、コウトウイヌビワ、ギランイヌビワ（クワ科）。

2. *Stathmopoda aprica* Meyrick, 1913 ヒメイヌビワマイコガ (Figs 2, 5, 11-15)

開張 8.5-13.0 mm. 前翅長 4.0-6.2 mm. 前種に似るが、前胸には斑紋が無く、中胸に黒褐色条が走る。前翅は橙色であり、前縁、基部、3/8, 7/10 に褐色帯が走る。前縁の条は太く、先端が 2 又となっている。雄交尾器のエデアグスにはコルヌツスを欠く。雌交尾器のコルプス・ブルサエに多数の骨片を持つ。本種は Kasy (1973) において *S. astricta* (Figs 3, 16) と同種である可能性が指摘されていたが、頭部背面の色彩、雄交尾器のウックス、グナトス、エデアグス先端の硬化部の大きさ、把握器基部のテグメンとの接点付近の太さによって識別でき、別種であることが確認された。成虫は 2-3, 5, 7-10, 12 月に発生する。分布：屋久島、奄美大島、沖縄本島、石垣島、西表島、与那国島；スリランカ。寄主植物：不明。

(Received October 26, 2012. Accepted January 15, 2013)